

BAT54DW / ADW / BDW / CDW / SDW / RDW

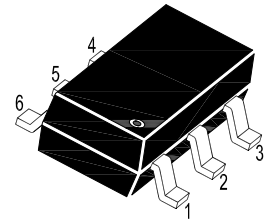
Surface Mount Schottky Barrier Diodes

Features

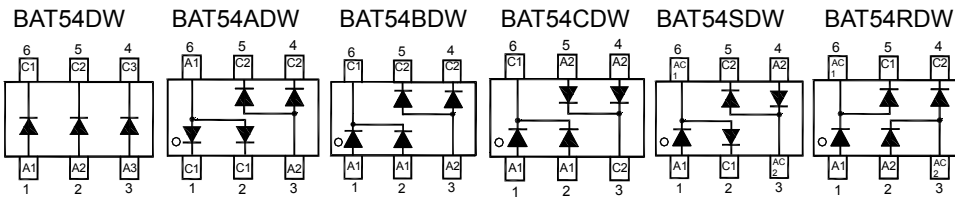
- Low forward voltage

Applications

- Ultra high-speed switching
- Voltage clamping
- Line termination



SOT-363 Plastic Package



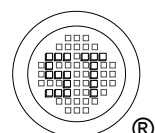
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Reverse Voltage	V_R	30	V
Forward Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Peak Forward Surge Current ($t_p = 10$ ms)	I_{FSM}	600	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Thermal Resistance

Parameter	Symbol	Value	Unit
Typical Thermal Resistance from Junction Ambient ¹⁾	$R_{\theta JA}$	500	$^\circ\text{C/W}$

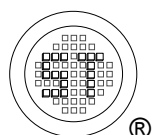
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	30	-	V
Forward Voltage at $I_F = 0.1 \text{ mA}$ at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 30 \text{ mA}$ at $I_F = 100 \text{ mA}$	V_F	- - - - -	240 320 400 500 800	mV
Reverse Current at $V_R = 25 \text{ V}$	I_R	-	2	μA
Total Capacitance at $V_R = 1 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	10	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}$ through $I_R = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$, $R_L = 100 \Omega$	t_{rr}	-	5	ns



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Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

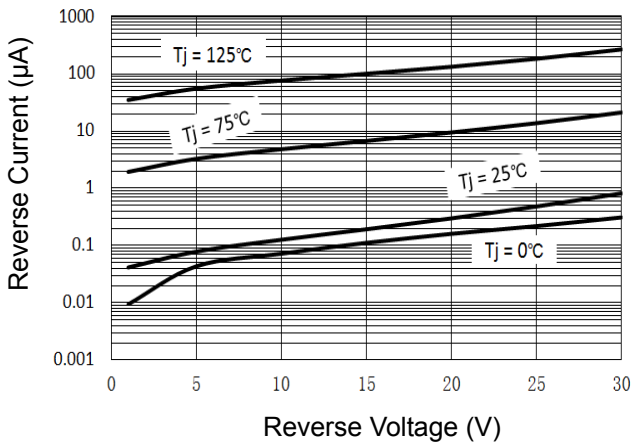


Fig 2. Forward Characteristics Curve

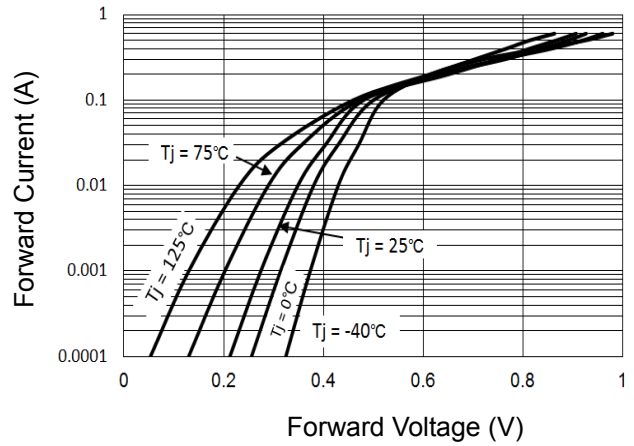


Fig 3. Junction Capacitance

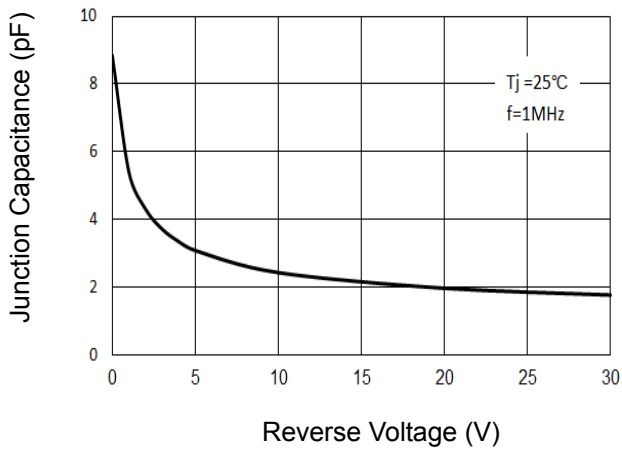
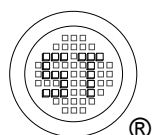
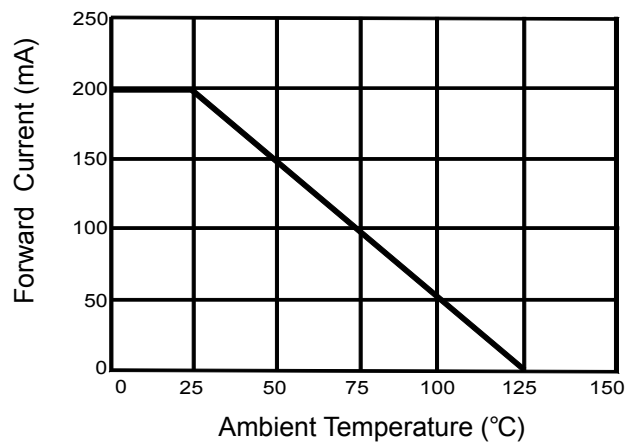


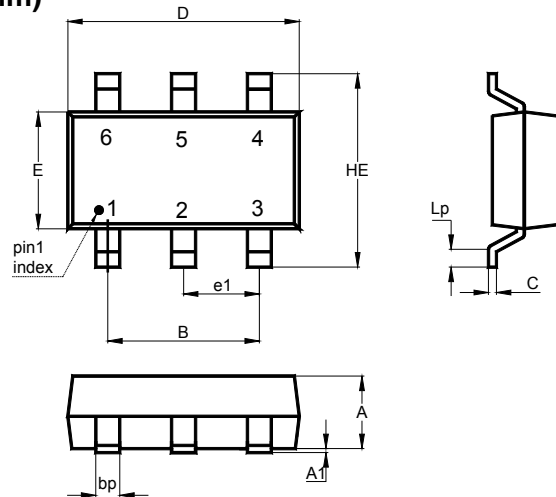
Fig 4. Forward Current Derating Curve



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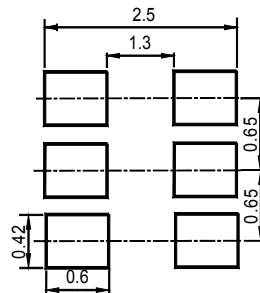
Package Outline (Dimensions in mm)

SOT-363



Unit	A	A1	B	C	D	E	e1	HE	Lp	bp
mm	1.0	0.1	1.3	0.25	2.2	1.35	0.65	2.2	0.4	0.3
	0.9	0	typ.	0.1	1.8	1.15	typ.	2.0	0.15	0.1

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-363	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" ** " = Part No.

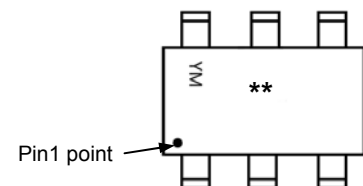
Type	Marking	Type	Marking	Type	Marking
BAT54DW	C2	BAT54ADW	C3	BAT54BDW	C7
BAT54CDW	C4	BAT54SDW	C5	BAT54RDW	C6

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial



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